UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ENVIRONMENTAL SERVICES DIVISION
60 WESTVIEW STREET, LEXINGTON, MASSACHUSETTS 02173-3185

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: June 16, 1994

SUBJECT: Request for a Removal Action
Transformer Disposal Area Superfund Site
West Greenwich and Coventry, Rhode Island.
- Action Memorandum

FROM: Paul R. Groulx, On-Scene Coordinator
Emergency Planning and Response Branch
Response and Prevention Section I

TO: John DeVillars
Regional Administrator

THRU: Edward J. Conley, Director
Environmental Services Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed Removal Action described herein for the Transformer Disposal Area Site (Site) located on property in the Towns of West Greenwich and Coventry, Rhode Island.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: RID987492618
Site ID#: Y2
Category: Time-critical

A. Site Description

1. Background

The Site is located on 14.2 acres of undeveloped, wooded land in both Coventry and West Greenwich, Rhode Island. The entire Site, though located in two different towns, is described on one property deed.

This property has been owned by the same family since 1798. It is the intent of the family to keep the property preserved in its original and natural condition.

In December 1991, several out-of-service transformers containing polychlorinated biphenyls (PCBs), were transported to and improperly disposed of at the Site. The transformers were taken from a mill complex in Providence, Rhode Island, loaded onto a pickup truck at the mill complex and transported south on Interstate Route 95. The hauler proceeded south, emptied some PCB fluid onto roadways in Cranston, Rhode Island, and proceeded to an inactive gravel pit access road off the Interstate in Coventry. The transformers were hauled about a quarter-mile into the woods on the Site where they were emptied of their contents. The transformer carcasses were then discarded at the Site.

2. Physical Location and Site Characteristics

The Site is located in central Rhode Island between Hopkins Hill Road, Arnold Road and Interstate Route 95. The Site is bounded by Interstate Route 95 (between exits 6 and 7) to the south, by a small, unnamed pond (about five acres in size) to the north, by an industrial park to the west, and by a large sand and gravel quarry to the east. Additional sand and gravel quarries are located just north of the small pond. In all, there are approximately 250 acres of sand and gravel quarries that are in the vicinity of the Site. These quarries connect with each other and the Site by means of numerous off-road vehicle paths and wooded paths linking a large network of inactive gravel pits. This series of paths provide access opportunities to the large gravel pit areas. Several paths/roads lead to the rear of the Hopkins Hill Elementary School which has utilized a nearby gravel pit as a giant sandbox and playground on Johnson Boulevard in Coventry.

Ten of the 14.2 acres of Site property are situated in the Town of West Greenwich, Rhode Island and 4.2 acres are situated in the Town of Coventry, Rhode Island. PCB contamination has been identified on both portions of the Site.

The land is undeveloped but utilized by many local youths and residents for recreational purposes including the use of motorized dirt bikes and all-

terrain vehicles (ATVs). Many points of access from abutting backyards exists and extend to the gravel pits and to the Site. Therefore, access to the Site is unrestricted. The nearest public building is 1,000 feet from the Site and the nearest residence is 2,250 feet from the Site.

Numerous wetlands and tributary streams are located within a mile of the Site. Three municipal drinking water wells utilized by the Kent County Water Authority, are located within two miles northwest of the Site. In addition there are approximately 250 private drinking water wells within one mile of the Site.

3. **Removal Site Evaluation**

At the request of the Rhode Island Department of Environmental Management (RIDEM), a Preliminary Assessment/Site Investigation (PA/SI) was performed by personnel from EPA's Emergency Planning and Response Branch (EPRB) on September 2, 1993. During the PA/SI, surface soil samples were collected for suspected PCB contamination. Field screening by Gas Chromatography/ Electron Capture Detector (GC/ECD) indicated the presence of PCBs at elevated levels at two on-site areas. PCBs were identified at a maximum concentration of 200,000 parts per million (ppm).

On February 15, 1994, the EPA Removal Site Investigator issued a Site Investigation Closure Memorandum. The findings of the PA/SI were summarized in the Removal PA/SI Report. Site conditions were evaluated under the criteria set forth in section 300.415 of the NCP and section 104(a), (b) of CERCLA, 42 U.S.C. §9604 (a) Pursuant to these criteria EPA determined that Site conditions warranted a time-critical removal action.

4. **Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant or Contaminant.**

As noted above in Section II-3 (Removal Site Evaluation), high levels of PCBs have been noted in surface soil samples collected at the Site. Stained soils and heavy PCB odors were documented at the portions of the Site where the transformer carcasses were disposed.

The PCBs identified at the site are hazardous substances as defined by section 101 (14) of CERCLA. PCBs are toxic for all routes of exposure, e.g., inhalation, ingestion and direct contact, and are hazardous substances as defined by section 101 (14) of CERCLA, or pollutants or contaminants as defined by section 101 (33) of CERCLA.

5. **NPL Status**

The Transformer Disposal Area Superfund Site has not been given a rating pursuant to the Hazardous Ranking System (HRS) and is therefore not currently on the U.S. Superfund National Priorities List.

B. **OTHER ACTIONS TO DATE**

1. **Previous Actions**

On February 25, 1992, RIDEM conducted an emergency response and removal of three transformers improperly disposed of on separate areas of the Site. On March 6, 1992, RIDEM continued removal activities and excavated stained soil visible in two of the three disposal areas. Soil samples collected by RIDEM on March 6, 1992, indicated that PCB-contaminated soil still existed at the Site. Details of RIDEM's emergency response activities can be found in the RIDEM report dated February 25, 1992 entitled: *Emergency Response Report, Nature of Incident: Dumping of PCB Transformer. Response No.: 92-23.*

RIDEM personnel conducted a Preliminary Assessment (PA) of the Site on May 12, 1993. RIDEM personnel reported the presence of a chemical odor in the vicinity of one of the excavated areas. RIDEM summarized their activities in a report dated June 1, 1993 entitled: *Preliminary Assessment of Transformer Disposal Area, West Greenwich, Rhode Island, RID987492618.*

Based on the results of the PA conducted by RIDEM, the Site was referred to the EPA for further investigation. See Part A, Section 3, Removal Site Evaluation for further details on the PA/SI which was conducted by EPA on September 3, 1993.

On March 7, 1994, EPA's EPRB and members from the Roy F. Weston, Inc. Technical Assistance Team (TAT) initiated a Comprehensive Site Investigation (CSI).

Information obtained from this CSI has been used to define the extent and depth of contamination, and to determine the appropriate methods to mitigate the potential threats posed by the contamination at the Site.

The analytical results from the CSI confirmed previous data that indicated PCB-contaminated soil remains in the two areas where RIDEM conducted the initial soil excavations. Extensive soil sampling was conducted in these two areas in order to define the extent of contamination. The analytical results obtained from these samples, along with the analytical results obtained during the PA/SI conducted by EPA in September 1993 will be incorporated into the final CSI Report which is currently being prepared.

In a letter dated March 31, 1994, EPA notified the property owner of her status as a potentially responsible party (PRP) with respect to the Site. This individual indicated in a letter dated May 3, 1994, that she had no knowledge of any disposal of hazardous materials on her property, nor did she ever give anyone permission to use the Site property for the disposal of PCB fluids or transformers at the Site or any use of this property.

As a result of a joint effort by the EPA Criminal Investigation Division, and RIDEM, as well as federal and state prosecutors, the owner of the mill complex who arranged for the disposal of the transformers and the individual who hauled the transformers and emptied their contents both on-site and off-site were each convicted on two counts for unlawfully disposing of PCBs and two counts for failing to report a release of PCBs into the environment. The hauler was sentenced to a 27-month prison term. The owner of the mill complex has appealed his conviction.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Threats to Public Health or Welfare

Access to the Site is unrestricted and the abutting gravel pits/quarries are utilized by residents including youths for recreation purposes. Countless ATVs, dirt bikes and other four-wheel-drive vehicles have been observed by EPA and

State officials during site inspections. The area where the transformer and PCB disposal took place is in an area of heavily traveled paths. Disposal of the PCB fluids by the hauler extended for several hundred feet along the wooded trails.

Unlimited Site access creates a potential human health threat should residents be exposed to hazardous substances, namely PCBs, contained in soil through dermal absorption, inhalation, and ingestion of PCB-contaminated soils.

IV. ENDANGERMENT

Potential and actual exposures to hazardous substances at the Site through dermal absorption, inhalation, and/or ingestion may present an imminent and substantial endangerment to public health or welfare if not addressed by implementing the response actions selected in this Action Memorandum.

PCBs are probable carcinogens in humans. There is evidence that PCBs may cause skin cancer in humans and they have been shown to cause liver cancer in animals. PCBs may be teratogens in humans since they have been shown to be teratogens in animals. PCBs may be passed to children through mother's milk. PCBs can affect the reproductive system of humans and animals, resulting in lower fertility. Long-term exposure to PCBs can cause liver damage and a severe acne-like rash (chloracne) which can persist for years. Exposure to high levels of PCBs can damage the nervous system, causing numbness, weakness, and tingling ("pins and needles") in the arms and legs. PCBs may contribute to shortened lifespan.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The proposed Removal Action includes the following:

a. Continue to maintain existing temporary fencing and signs placed by the RIDEM (through the duration of the cleanup).
b. Finalize the CSI Report.
c. Coordinate the removal of contaminated soils

which contain hazardous substances, as deemed appropriate in the CSI Report.

d. Perform appropriate cleanup level at the Site, in accordance with 40 CFR 761, Subpart G, Article 761.123 (4)(v), PCB Cleanup Policy, all surface soils with PCB levels above 10 ppm shall be excavated, providing that the soil is excavated to a minimum of 10 inches. If further contamination exists, further excavation or capping will be considered. All materials will be disposed of in accordance with the EPA CERCLA Off-Site Disposal Rule.

2. **Contribution to Remedial Performance**

There are no remedial actions currently planned for this Site.

3. **Description of alternative technologies**

Treatment alternatives appropriate for PCB-contaminated soils will be evaluated. At present, off-site incineration and landfill will be the primary technologies considered for this cleanup.

4. **Applicable or Relevant and Appropriate Requirements (ARARs)**

All ARARs will be compiled and evaluated and will be applied to the extent practicable. The On-Scene Coordinator (OSC) has requested from RIDEM the identification of all State ARARs as they relate to this Site.

5. **Project Schedule**

The Removal Action will take approximately three months to complete, barring adverse weather conditions. The on-site response activities will commence within two weeks of approval of this Action Memorandum.

B. **ESTIMATED COSTS**

- EXTRAMURAL COSTS:
  - o Regional Allowance Costs:
    Extramural Contractor Cost $ 300,000

o Other Extramural Costs: Technical Assistance Team	$ 88,000
o Subtotal, Extramural Costs:	$ 388,000
o Extramural Project Contingency:	$ 72,600
* TOTAL EXTRAMURAL COSTS AND CONTINGENCY:	$ 460,600
- INTRAMURAL COSTS:	
o EPA regional Costs: (Direct and Indirect)	$ 60,000
o Intramural Contingency :	$ 10,000
* TOTAL INTRAMURAL COSTS AND CONTINGENCY:	$ 70,000
TOTAL REMOVAL PROJECT CEILING:	$ 530,600

VI. **EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Delayed action will increase public health risks and endangerment posed by hazardous substances on-site.

VII. **OUTSTANDING POLICY ISSUES**

None.

VIII. **ENFORCEMENT**

Enforcement information is attached for internal EPA distribution only.

IX. **RECOMMENDATION**

The following factors were considered in determining the appropriateness of a Removal Action for the Transformer Disposal Site located in West Greenwich and Coventry, Rhode Island pursuant to section 300.415(b) (2) of the NCP:

"Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous

substances or pollutants or contaminants"..... [300.415(b) (2) (i)];

"High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate"..... [300.415(b) (2) (iv)];

"Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released"... [300.415(b) (2) (v)].

"Other situations or factors that may pose threats to public health or welfare or the environment"..... [300.415(b) (2) (viii)].

Therefore, I recommend approval of this Removal Action. The total estimated project ceiling is $530,600 of which $460,600 is budgeted for extramural contractor costs.

APPROVAL: Patricia L. Meaney DATE 6/17/94

DISAPPROVAL: _____ DATE _____